ABSTRACT OF THE DISCLOSURE

In one aspect, the present invention provides methods of determining susceptibility to bone fracture in a mammalian subject, wherein the methods comprise analyzing nucleic acid molecules obtained from the mammalian subject to determine

5   which of the P, p X, and x alleles of the estrogen receptor α gene are present, wherein the presence of a haplotype comprising the p and x alleles is indicative of an increased susceptibility to bone fracture. The present invention also provides kits for determining susceptibility to bone fracture in a mammalian subject.

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